Application No.: 10/511,715 Amendment under 37 C.F.R. §1.111

Art Unit: 4162 Attorney Docket No.: 042834

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently amended): A 12CaO · 7Al₂O₃ compound, which incorporates a negative

hydrogen ion (H⁻, H²⁻, H₂⁻) at a concentration of 1×10^{18} cm⁻³ or more, which has an electronic

conductance equivalent to an electric conductivity of 10⁻⁵ Scm⁻¹ or more.

2. (Currently amended): A 12SrO · 7Al₂O₃ compound, which incorporates a negative

hydrogen ion (H⁻, H²⁻, H₂⁻) at a concentration of 1 × 10¹⁸ cm⁻³ or more, which has an electronic

conductance equivalent to an electric conductivity of 10⁻⁵ Scm⁻¹ or more.

3. (Currently amended): A mixed crystal compound of 12CaO · 7Al₂O₃ and 12SrO ·

 $7Al_2O_3$, which incorporates a negative hydrogen ion (H⁻, H²⁻, H₂⁻) at a concentration of 1×10^{18}

cm⁻³ or more, which has an electronic conductance equivalent to an electric conductivity of 10⁻⁵

Scm⁻¹ or more.

4-6. (Cancelled).

7. (Currently amended): A method of producing the compound as defined in either one

of claims 1 to 3, comprising subjecting either one selected from the group consisting of a 12CaO

 \cdot 7Al₂O₃ compound, a 12SrO \cdot 7Al₂O₃ compound, and a mixed crystal compound of 12CaO \cdot

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7Al₂O₃ and 12SrO · 7Al₂O₃ to a heat treatment at a temperature of 800°C or more in an

atmosphere containing 1000 ppm or more of hydrogen, to thereby clathrate a negative hydrogen

ion (H⁻, H²⁻, H₂) into said selected compound at a concentration of 1×10^{18} cm⁻³ or more, and

further irradiate said selected compound with ultraviolet ray or X-ray.

8. (Currently amended): A transparent electrode or wiring, which is formed using the

compound as defined in claim 4 either one of claims 1 to 3.

9. (Currently amended): An optically writable and erasable 3-dimensional electronic

circuit and 3-dimensional storage element, which is formed using the compound as defined in

claim 5 either one of claims 1 to 3.

10. (Currently amended): A negative hydrogen ion (H⁻, H²⁻, H₂⁻)-conducting solid-

electrolyte, which is formed using the compound as defined in claim-6 either one of claims 1 to

<u>3</u>.

11. (Cancelled).

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